

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/269,503	KANEKO ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Timothy L. Rude	2883	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 11 November 2004.
2. ☒ The allowed claim(s) is/are 2,4,6,8,10,12,14 and 16.
3. ☒ The drawings filed on 29 March 1999 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

tlr

## DETAILED ACTION

### ***Claims***

Claims 1, 11, 17, and 18 are canceled. Claim 2 is amended.

### ***Allowable Subject Matter***

Claims 2, 4, 6, 8, 10, 12, 14, and 16 are allowed.

The following is an examiner's statement of reasons for allowance:

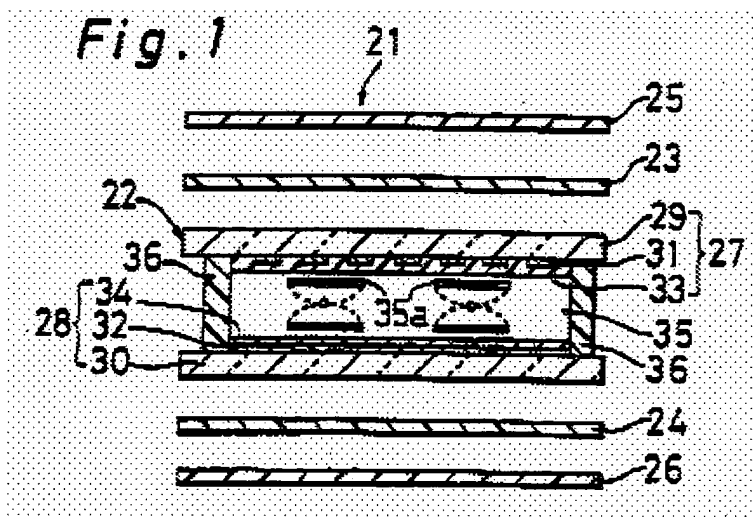
As to claim 2, Applicant's amendment filed 11 November 2004 added new limitations that overcome rejections per Applicant's arguments on page 9 of Applicant's remarks filed 11 November 2004. Relevant prior art of record, alone or in combination, do not teach a liquid crystal display device as claimed wherein the device switches from a light absorbing layer colored **reflective** state to an increased brightness state (mirror like reflective state per structure and specification).

The closest combination is Ouderkirk et al (Ouderkirk) USPAT 6124971 in view of Nakanishi et al (Nakanishi) USPAT 5,587,821.

Ouderkirk discloses the use of a reflective polarizer (col. 16, lines 30-48), a front dichroic polarizer (col. 16, lines 48-49), and a light absorbing member outside the reflective polarizer (col. 17, lines 9-11).

Ouderkirk differs from the claimed invention because he does not disclose the use of a super twisted nematic liquid crystal, a retardation film having relations of  $n_x > n_z > n_y$ .

Nakanishi discloses in the Summary of the Invention, a super twisted nematic liquid crystal cell having electrodes, 31 and 32, a retardation film, 23, outside second substrate, an absorption-type polarizer, 25, outside the retardation film. Nakanishi also discloses the use of one or more retardation films with the relationship  $n_z = (n_x - n_y) / (n_x + n_y)$ , where  $0 < n_z < 0.5$  (col. 5, lines 10-15) which satisfies  $n_x > n_z > n_y$  for all values of  $n_z > 0$  to compensate for liquid crystal layer birefringence to obtain excellent display quality in both of the opposing viewing angle directions (Abstract).



Nakanishi teaches that his compensator is applicable to reflective displays (col. 15, lines 26-31). Note that satisfactory compensation of  $n_x$ ,  $n_y$ , and  $n_z$  of Nakanishi would result in light compensation that is substantially polarized light during passage through the absorption-type polarizing film, the retardation film, and the super twisted

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nematic liquid crystal cell, in a state with no voltage applied, as evidenced by the excellent display quality in both of the opposing viewing angle directions.

Although structures similar to Applicant's exist in the art, they are almost exclusively designed to switch from a very dark state (ideally black) to a very bright state (ideally white or a high-brightness primary color). Since black is the absence of all color (absence of all reflection), such displays are considered to not read on the claimed invention.

As to claims 4, 6, 8, 10, 12, 14, and 16, they are directly dependent upon claim 2 with allowable subject matter above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Monday through Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tlr

Timothy L Rude  
Examiner  
Art Unit 2883



Frank G. Font  
Supervisory Patent Examiner  
Technology Center 2883